

DOCUMENT-IDENTIFIER: US 6169896 B1

TITLE: System for evaluating communication network services

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DEPR:

The subroutine for the record location process performed at the mobile end and in the subroutine illustrated in FIG. 5 is set forth in FIG. 8. It will be seen that the system immediately records the time, X, upon initiation of the call and that such time information is updated every T seconds, with T being about four seconds as the system is used at present. At each time update, the vehicle position (longitude and latitude) and speed are also input into the system as indicated. This information is maintained in a table in the computer, and it is used when the call quality process is initiated so that each call segment, i.e., sentence, will be tagged with the correct mobile end location and vehicle speed.

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379/9

L Number	Hits	Search Text	DB	Time stamp
1	5815	(cdr or (calling adj detail adj record) or (call with (data or record))) and (longitud\$4 or latitud\$4 or vertical or horizontal)	USPAT	2002/05/17 10:51
2	352	(cdr or (calling adj detail adj record) or (call with (data or record))) same (longitud\$4 or latitud\$4 or vertical or horizontal)	USPAT	2002/05/17 10:34
3	72	((cdr or (calling adj detail adj record) or (call with (data or record))) same (longitud\$4 or latitud\$4 or vertical or horizontal)) and 379/\$.ccls.	USPAT	2002/05/17 11:02
4	150	((cdr or (calling adj detail adj record) or (call with (data or record))) same (longitud\$4 or latitud\$4 or vertical or horizontal)) same (stor\$3 or record\$3)	USPAT	2002/05/17 10:44
5	38	((cdr or (calling adj detail adj record) or (call with (data or record))) same (longitud\$4 or latitud\$4 or vertical or horizontal)) same (stor\$3 or record\$3)) and 379/\$.ccls.	USPAT	2002/05/17 10:44
6	95	(cdr or (calling adj detail adj record) or (call with (data or record))) and (longitud\$4 or latitud\$4 or vertical or horizontal)	EPO; JPO; DERWENT; IBM_TDB	2002/05/17 10:51
7	73	(cdr or (calling adj detail adj record) or (call with (data or record))) same (longitud\$4 or latitud\$4 or vertical or horizontal)	EPO; JPO; DERWENT; IBM_TDB	2002/05/17 10:51
8	18	demographic same (longitud\$4 or latitud\$4 or vertical or horizontal)	USPAT	2002/05/17 11:01



US006385302B1

(12) **United States Patent**
Antonucci et al.

(10) Patent No.: **US 6,385,302 B1**
(45) Date of Patent: **May 7, 2002**

(54) **SYSTEM AND METHOD FOR HANDLING SPECIAL NUMBER CALLS USING ON-DEMAND ANSWERING STATIONS**

5,884,032 A * 3/1999 Bateman et al. 370/356
6,185,282 B1 * 2/2001 Boeckman et al. 379/207.15

* cited by examiner

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(57) **ABSTRACT**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

A telecommunication system configured for use with a network for handling special number calls is described. The network includes a plurality of switching junctions connected by a plurality of channels, a plurality of service providing stations connected into the network at at least one of the switching junctions and the plurality of channels for effecting various telecommunication milieux. Selected of the service providing stations serve customer-operated communication devices using selected of the telecommunication milieux. The system comprises: (a) an action station configured for selective connection with action agencies; (b) an answering station connected with an action station; (c) a call processing center connected with an answering station and configured for connection with the network; and (d) an on-demand answering station connected in a virtual private network with a call processing center and with an action station. The method contemplates handling a special number call placed in the network, and comprises the steps of: (a) routing the call via the network to a call processing center connected with the network; (b) routing the call to at least one of the following via a virtual private network: (1) an answering station; or (2) an on-demand answering station; (c) evaluating service required by the call; (d) selecting an action agency appropriate for providing the service required; and (e) alerting the selected action agency regarding the service required. The method may comprise the further step of: (f) routing the call to the selected action agency.

(21) Appl. No.: **09/518,998**

(22) Filed: **Mar. 3, 2000**

Related U.S. Application Data

(63) Continuation of application No. 09/499,773, filed on Feb. 8, 2000.

(51) Int. Cl.⁷ **H04M 11/04; H04M 1/56; H04M 3/42; H04M 1/00**

(52) U.S. Cl. **379/45; 379/142.1; 379/216.01; 379/355.01**

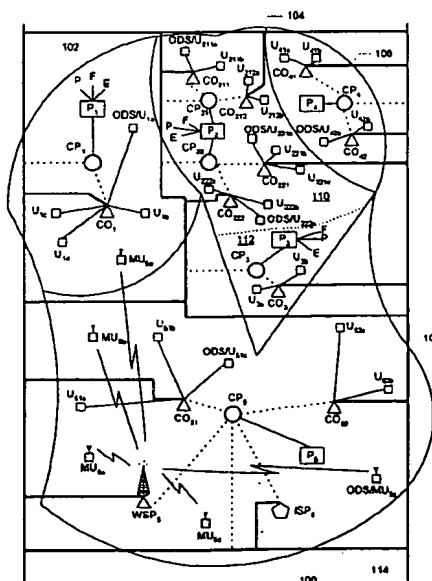
(58) Field of Search **379/40, 45, 142.1, 379/216.01, 355.01**

(56) **References Cited**

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5,797,093 A * 8/1998 Houde 455/404

18 Claims, 8 Drawing Sheets



DOCUMENT-IDENTIFIER: US 6205210 B1

TITLE: Method for improved automatic message accounting in telephony

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BSPR:

Toll call rating today is based primarily on time and distance. The AMA (automatic message accounting) record includes the call duration (time) and both the calling and called NPA-NXXs (meaning the digits of numbering plan areas plus the three digits of the office code) from which the V/H (Vertical and Horizontal) coordinates of the calling and called rate centres are determined. From the V/H coordinates, the distance and distance band are calculated. From the distance band the call rate is determined.

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DOCUMENT-IDENTIFIER: US 5799071 A

TITLE: Telecommunications cost-minimizing system

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BSPR:

The telecommunications system accommodates multiple users and can communicate with the selected carrier via in-band or out-of-band signalling methods. In the first method, the geographical location (vertical and horizontal coordinates) of the dialed telephone number are stored in the first memory and are periodically updated via the telephone line, computer diskettes or plug-in memory chips. In the second method, the information is obtained from on-line databases via high speed data links on a per call basis. Furthermore, the telecommunication system can be embodied in three forms: software-installed on a user's personal computer connected to a telephone line via a modem; software and plug-in PC board-installed on a user's personal computer connecting the telephone line to the computer; and stand-alone connects with the user's telephone system.

DEPR:

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DOCUMENT-IDENTIFIER: US 6185194 B1

TITLE: System and method for initiating a telephone call utilizing internet initiation

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DEPR:

Upon a second click (step 321), the call request data is sent to the call server. At step 322, the call data is recorded and the user and business locations are determined by accessing a map database. The map database has longitude and latitude coordinates which can be used, in combination with a calling rates database, to determine the distances from each call center to the user and business and times at each call center to determine the call center with the lowest calling rate available for the particular call at step 324.

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